

State of Alaska FY2003 Governor's Operating Budget

Department of Natural Resources Information Resource Management Component Budget Summary

Component: Information Resource Management

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Component Mission

To provide data processing services and graphic land records to the Department of Natural Resources, and to assure public access to information.

Component Services Provided

The Information Resource Management (IRM) component provides several primary services for the public, the department, other government agencies, and the private sector:

1. This component creates and maintains the state graphic land record, the Status Plat. There about 20,000 plats that depict the state's land ownership, and the history of actions taken that affect that ownership position. The public can now easily access these land records via the Internet at <http://dnr.state.ak.us/landrecords>. Land records constantly change as the department does business with the public and makes decisions effecting land management activity. These changes are captured on the state Status Plats. Annual updates range between 15,000-30,000 depending on activity levels. The plats portray state land ownership, classification, disposals, right-of-ways, trust lands, and disposition of property rights.
2. The IRM Component creates and maintains the department's resource transaction and revenue receipting system; the Land Administration System (LAS). This mainframe computer system is the primary means for DNR to track the status of an individual case-file through the adjudication process, and for assuring timely management of billing, receipting, and distribution of DNR revenues. Customers include major industry groups for Oil and Gas and Mining, as well thousands of Alaskans working with DNR to help develop the state and its resources. IRM also designed and supports the computer system used by the State Recorder's Office to index and image public property records. About 200,000 legal documents are recorded each year in this statewide system.
3. The IRM Component provides computer programming, resource analysis, inventory mapping, and database management through Geographic Information Systems, or GIS. Alaska's vast geographic expanse requires the application of mapping systems to inventory and monitor key resources. GIS applications support strategic decision making by combining a wide variety of information sources and presenting scenarios to policy makers and land managers. The GIS Unit provides support and training to several department wide GIS user projects, especially those located in Mining, Land and Water; Geological Survey; and Forestry. The GIS Unit is responsible for the computer system that operates the automated Status Plat System used by Status Graphics Staff. The public receives an important service through the GIS Public Access program which assures data and maps are available.
4. The IRM component provides the management environment for the staff of department's statewide telecommunications and computer network. These staff provide computer and networking support to all DNR offices. Computer and network services costs are now consolidated under the Data Processing Chargeback Component where Local Area Network costs are now combined with the Dept. of Administration Wide Area Network costs.

Component Goals and Strategies

A primary DNR strategy is to offer the public efficient services. The Information Resource Management (IRM) Component undertakes technology projects to support the highest priority business applications in the department. The central management of DNR Information Technology staff assures successful integration of systems. IRM systems make a direct difference with the public, whether they are major industry groups, such as the Mining Industry, or individual Alaskans who need to work with DNR. IRM is organized into four units:

Business Programming:

Key Product: Information Systems
Manager: John Cacy, Analyst Programmer V ph: 269-8827
Web Sites: <http://www.dnr.state.ak.us/ssd/recoff/search.cfm>
Recorder's Office System - statewide, on-line
<http://nutmeg.state.ak.us/ixpress/dnr/case/lasmenu.dml>
Search DNR business database, make credit card payments

Goal 1. Re-program the DNR Land Administration System (LAS).

Outcomes: This goal delivers updates to current DNR computer systems. Part of the updates will come by extending the present mainframe system to include 'windows' based input screens, and flexible reporting screens using web screen formats. This goal also envisions building new sub-systems using Oracle relational database. The Oracle and mainframe systems will exchange information. DNR business systems must assure timely and efficient transfer of receipts to the general fund, Permanent Fund, and other funds as required by law.

Goal 2. Expand Document Imaging System – complete implementation of State Recorder's Office document management system, offer Internet access to Recorder's Office indexing system. Move Uniform Commercial Code (UCC) filings to a paperless system per recently adopted Alaska statutes. Work with Oil and Gas on document management system for royalty processing.

Outcomes: Improved customer satisfaction, efficient internal operations, and elimination of duplicate key entry strokes between related systems.

Goal 3. Expand Electronic Data Interface (EDI) filings by the oil and gas industry for Royalty and Operator Reports for Oil & Gas Leases. Build digital signature system to automate lease assignments managed by the Division of Oil & Gas.

Outcomes: Raise quality of state records by eliminating thousands of redundant keystrokes, speed analysis of royalty reporting, and strengthen support for state oil and gas auditors. Reduce costs of processing lease assignments for both industry and state.

Status Graphics:

Key Product: State Status Plat <http://www.dnr.state.ak.us/landrecords>
Manager: Duncan Purvis, Natural Resource Manager II 269-8832

Goal 1. Reduce four-month turn around time for 15,000 pending actions against Arc Townships to two months. Focus on streamlining business process. Improve update methods used to provide integrated access to matching federal land records. Incorporate electronic updates from user community. Accomplish this goal with HALF the staff used for this job ten years ago – a direct payoff from automation worth about \$650,000.00 per year in savings.

Outcomes: Satisfied customers at minimum costs, current land records save staff time and effort, public land record is more reliable, Internet accessible to all.

Goal 2. Reduce 45-day turn around time for mining claim and prospecting sites updates to 30 days, formerly an eight-month to twelve-month process before automation.

Outcomes: Current and reliable mining property records support the growth of Alaska's \$1billion per year industry.

Goal 3. Continue to Automate Remaining Mylar based townships.

Outcome: lower cost of future updates, more flexibility for staff to access land status information using a geographic information system.

Geographic Information Systems:

Key Products: Geo-spatial information systems
Manager: Sean Weems, Analyst Programmer V 269-8847
Main Web Sites:
<http://www.asgdc.state.ak.us/> Public Spatial Data Systems
http://www.dnr.state.ak.us/lris/gis_maplib/maplib_start.cfm Maps On-line
http://www.dnr.state.ak.us/ssd/lris/gis/mcis_p0/index.cfm Mining Claims

Goal 1. Convert legacy geo-spatial data formats to new GIS database using relational database technology. Deliver on tasks defined by the Core GIS Project.

Outcome: Improves DNR ability to maintain public land records, creates one seamless database, expands public access to land information, make state status plat easier to understand, offers on-line GIS capability, provides the state with an opportunity for expansion to State of Alaska enterprise GIS system. GIS also maintains the landrecords web site that delivers the current state and federal plats and surveys (see Status Graphics).

Goal 2. Integrate the department's tabular databases with DNR's spatial systems - build Oracle GIS system that accesses business systems information.

Outcome: Information becomes more accessible via Internet, records are more consistent, and customers' applications for permits and leases can be processed faster.

Goal 3. Collaborate with federal, native and local agencies to build statewide digital access to land records information: Deliver on tasks defined by interagency Cadastral Project.

Outcomes: Information will be shared between local, state, native, and federal land record systems. DNR staff will take the next steps toward building integrated view of land ownership information needed for land management decisions and case adjudication. Less DNR staff time will be spent collecting essential information on land ownership, making permitting and case adjudication more efficient. Local governments will benefit from electronic delivery of information from the State Recorder's Office. State, federal, and local survey systems will be better coordinated at a technical level. This project overlaps with Business Programming Unit.

Goal 4. Expand use and knowledge of GIS and remote sensing within the department.

Work with the Division of Forestry per the contractual terms of the NASA grant administered under the NASA State, Local, and Tribal program. Begin to incorporate ortho-imagery as the basemap for land status and resource management overlay information.

Computer Information Center: (see also Data Processing Chargeback Component)

Key Products: DNR Computing Infrastructure, Computer Networks

Manager: Brian Heise, Data Processing Manager I, 269-8861

Main Web Sites: -(mostly internal web sites for DNR customers self- help)

Provides hardware & software environment for main DNR web server: <http://www.dnr.state.ak.us>

Goal 1. Manage Information Technology resources as a department asset - control costs, maximize sharing on over 950 networked devices.

Outcome: The physical plant of computers, networks, and software remains current and operational to meet DNR staff needs and public access requirements

Goal 2. Minimize network costs to Dept. of Administration with efficient design and deployment.

Outcome: Strong network architecture and minimized components reduces operating costs for DNR and DOA.

Key Component Issues for FY2002 – 2003

Today's society demands that we bring DNR's data base records, maps, and documents to the desktops of resource managers and staff; and to make our systems generally more open and available to the public. These rising expectations require using technology in a way that is cost effective, secure, and reliable. Budget declines have forced DNR to reduce staffing, and thus increase average workloads. Productivity per staff has risen because of streamlined procedures and better technologies such as email and Internet. Further gains in productivity for DNR staff are possible by raising the quality of technology used to deliver essential services, and decreasing the amount of time staff need to answer basic questions about land use regarding applications, permits, leases, land sales, water rights and so on. DNR staff require high volumes of information from a wide range of sources to successfully process applications and plan land management activities. The IRM component is a strategic partner with all DNR staff as we try to offer the highest quality information systems in support of our mission.

Our major issue for FY03 is with the central data processing system, the Land Administration System (LAS). A rewrite (through CIP funding) of the Land Administration Legacy System is essential and long overdue. LAS is the primary

means for entering and accessing land and resource information related to case files for all of the DNR employees. This project is being initiated in FY02.

A second issue is the integration of recording, mining, and land records data bases addressed in FY2001 and FY2002. Driven by the need to greatly improve the manner in which mining property rights are managed and tracked, this issue brings federal funds to a solution that benefits the public who rely upon state and federal land records to determine land status. This project puts the customer's perspective ahead of any specific agency agenda, and works to deliver information that bridges historically isolated information systems.

A third key issue is regarding the maintenance of our land status plats. Cutbacks and rising costs have reduced staffing to point we cannot maintain the public graphic land record to the expected standard. An increment request for FY02 was denied by the legislature. To prevent an increased backlog, managers worked to realign budgets after alternative funding sources were identified. A cartographer was hired to focus on the mining claims. Today progress is steady toward reducing the total backlog of work which has seen a 30% improvement over this time last year.

A more detailed view of the issues comes from taking a more technical view. The key technical challenges for the IRM Component are in three main areas:

Transaction Processing

- Moving DNR toward a "paperless office" - introduce operational efficiencies with document systems. DNR has many initial successes in this area.
- Re-designing business processes, especially those that cross organizational boundaries.
- Incorporating spatial updates to the transaction processing system (no minor feat).
- Linking Mainframe ADABAS systems to the Internet - a common need for several departments.
- Expanding business transaction services over the Internet (payments, applications, cabin rentals, etc.); teaming with DOA-ITG for portal services.
- Using automation to improve public notice, review, and comment process, reduce processing time.
- Putting DNR permit information on line, including applications and status information.
- Taking steps to advance to an integrated relational database system linking transaction, spatial, documents, and images.

Land Records / Geographic Information Systems

- Moving GIS to relational database and introduce parcel management system.
- Reducing the time required to update status plats, direct links between geo-spatial and transaction processing systems.
- Complete the integration of state and federal land records via web programming, use a customer-centric design.
- Building a common database for the land record system; finish plat conversion effort.
- Acquiring statewide high-resolution digital elevation model and digital orthophoto image basemap for state, and local use.
- Expanding on-line access to USGS topographic maps with ability to add-in DNR specific information.

Data Management

- Offering on-line search capability for staff and the public to find information. Alaska Framework - databases from USGS needs to be made available to DNR.

Major Component Accomplishments in 2001

1. Expanded free public web site for on-line access to our State Status Plats & Survey by including tens of thousands of federal land records needed by DNR staff. See <http://www.dnr.state.ak.us/landrecords>
2. Expanded operational efficiencies in the Recorder's Office and Uniform Commercial Code (UCC) Systems by introducing real-time Internet access to index database, and new document imaging-bar code system. July 2, 2001 start date for imaging. See:
<http://www.dnr.state.ak.us/ssd/recoff/search.cfm>
<http://www.dnr.state.ak.us/ssd/ucc/search.cfm>
3. Completed Mining Claims System by updating over 6000 mining prospecting sites, and placing current sites on the DNR status plat using automated mapping. Greatly streamlines old methods - Links DNR Land

Administration System to use input from Recorder's Office System for Mining Claims and Prospecting Sites. Eliminated backlog of several thousand prospecting sites and claims by radically boosting worker productivity. First time publication of federal claim locations (long needed by DNR). See:
http://www.dnr.state.ak.us/ssd/lris/gis/mcis_p0/index.cfm

4. Expanded Enterprise Email System Services to DNR staff with new on-line help screens, deployment of enterprise Calendar System (Corporate Time), new virus screening systems deployed to minimize disruption.
5. Expanded the electronic Oil & Gas Royalty Reporting system to new leaseholders using electronic data interchange standards (EDI), strengthened DNR's ability to process Oil and Gas royalty payments with process improvements to royalty-in-value and royalty-in-kind accounting system.
6. Distributed hundreds of maps to the public and DNR staff displaying project specific information related to land transfers, land sales, acquisitions, fire support, forest health, forest practices, mineral development, etc. Maps are now available on-line.
7. DNR adopted a formal internal policy requiring federal metadata standards be applied to geo-spatial source files which significantly advances the goal of finding and sharing essential geographic information.
8. Public Access program has major advances via Web Site development, & user training, see <http://www.asgdc.state.ak.us> for updates, special attention focused on joint federal-state mining claim information system.
9. Trained over 150 DNR staff on Status Plat Interpretation Class and Introduction to DNR Information Systems Class— highest marks ever.
10. Strengthened the Technical Workforce: successfully recruited network technicians, analyst programmers, and cartographers.
11. Updated and maintained ownership maps and status plats on over 106 million acres of state entitlement lands, processed over 30,000 updates to the status plat, with about 40% of those coming from automated systems which lowers the total cost.
12. Provided systems for billing, accounting, and receipting of department generated revenue, \$1.0 Billion + in FY01 distributed to public funds.

Statutory and Regulatory Authority

This component operates under Alaska Statutes, 38.05.020; 38.05.035; 38.04.065; 41.08.030; 38.05.030; 09.25.115; 41.08.020; 40.21.060; 37.14.425; 09.25.120; 41.08.035; and Alaska Administrative Codes, 6AAC Chapter 96; 11AAC 05.010.

Information Resource Management

Component Financial Summary

All dollars in thousands

	FY2001 Actuals	FY2002 Authorized	FY2003 Governor
Non-Formula Program:			
Component Expenditures:			
71000 Personal Services	1,799.0	1,943.5	2,082.6
72000 Travel	4.1	7.0	10.2
73000 Contractual	149.6	204.3	298.3
74000 Supplies	157.0	123.1	128.4
75000 Equipment	4.7	0.0	0.0
76000 Land/Buildings	0.0	0.0	0.0
77000 Grants, Claims	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
Expenditure Totals	2,114.4	2,277.9	2,519.5
Funding Sources:			
1002 Federal Receipts	58.4	30.6	230.9
1004 General Fund Receipts	1,657.5	1,606.2	1,635.1
1005 General Fund/Program Receipts	19.6	51.2	51.7
1007 Inter-Agency Receipts	216.6	153.7	157.4
1053 Investment Loss Trust Fund	8.0	0.0	0.0
1055 Inter-agency/Oil & Hazardous Waste	0.0	30.3	30.9
1061 Capital Improvement Project Receipts	151.6	405.9	413.5
1108 Statutory Designated Program Receipts	2.7	0.0	0.0
Funding Totals	2,114.4	2,277.9	2,519.5

Estimated Revenue Collections

Description	Master Revenue Account	FY2001 Actuals	FY2002 Authorized	FY2002 Cash Estimate	FY2003 Governor	FY2004 Forecast
Unrestricted Revenues						
General Fund Program Receipts	51060	6.6	0.0	0.0	0.0	0.0
Unrestricted Total		6.6	0.0	0.0	0.0	0.0
Restricted Revenues						
Federal Receipts	51010	58.4	30.6	30.6	230.9	200.0
Interagency Receipts	51015	216.6	153.7	195.0	157.4	157.4
General Fund Program Receipts	51060	19.6	51.2	51.2	51.7	51.7
Statutory Designated Program Receipts	51063	2.7	0.0	0.0	0.0	0.0
Capital Improvement Project Receipts	51200	151.6	405.9	445.9	413.5	413.5
Interagency Recs./Oil & Hazardous Waste	51395	0.0	30.3	30.0	30.9	30.9
Restricted Total		448.9	671.7	752.7	884.4	853.5

Description	Master Revenue Account	FY2001 Actuals	FY2002 Authorized	FY2002 Cash Estimate	FY2003 Governor	FY2004 Forecast
Total Estimated Revenues		455.5	671.7	752.7	884.4	853.5

Information Resource Management

Proposed Changes in Levels of Service for FY2003

Several important changes to the Information Resource Management Component are proposed for Fiscal Year 2003.

- Integrated Data Framework Federal Contract - \$200.0 Federal Receipts (Increment)

DNR entered into a contract which will assure that portions of the DNR and federal BLM record systems are designed to be integrated via Internet technologies. This effort builds upon the last several years of successful collaboration between BLM and DNR to extend public access to land and survey plats. The work will set technical standards for shared web sites developed under federal funding.

Capital Project Deliverables

- The FY02 capital project "Land Administration System Update for Improved Access" to update the DNR legacy mainframe transaction system will move into year 2. We face several large-scale challenges to create an enterprise system that is good for the public and our employees. Key deliverables will focus on raising the productivity of DNR staff that process permits and applications and improve access to our database by the public.

- The federally funded capital project "Minerals-Information-At-Risk Project" is designed to assure minerals databases and mining related record systems are brought forward using modern technologies. The IRM Component has teamed with the Bureau of Land Management to deliver a Mining Claim Information System that will provide the mining public with a combined view of land status regarding both state and federal mining claims, mineral surveys, prospecting sites, and other land status records that effect mining. There are four primary project areas: on-line land plats, reducing the cycle time for mining records updates between related systems; providing document imaging systems for recorded mining documents; and building a mapping system to show land status information with geological information. This is a multi-year project and the FY03 emphasis will be on building a single integrated land and mineral property database using the state parcel database as the foundation. This is a major move into relational database technology for spatial systems. The Division of Geological and Geophysical Survey is a partner under this program.

Summary of Component Budget Changes

From FY2002 Authorized to FY2003 Governor

All dollars in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2002 Authorized	1,657.4	30.6	589.9	2,277.9
Adjustments which will continue current level of service:				
-Year 3 Labor Costs - Net Change from FY2002	29.4	0.3	11.9	41.6
Proposed budget increases:				
-Integrated Data Framework Federal Contract	0.0	200.0	0.0	200.0
FY2003 Governor	1,686.8	230.9	601.8	2,519.5

Information Resource Management

Personal Services Information

Authorized Positions		Personal Services Costs		
	<u>FY2002</u>	<u>FY2003</u>		
	<u>Authorized</u>	<u>Governor</u>		
Full-time	30	30	Annual Salaries	1,558,349
Part-time	0	0	COLA	35,258
Nonpermanent	0	0	Premium Pay	0
			Annual Benefits	549,551
			<i>Less 2.83% Vacancy Factor</i>	(60,558)
			Lump Sum Premium Pay	0
Totals	30	30	Total Personal Services	2,082,600

Position Classification Summary

Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Administrative Clerk III	1	0	0	0	1
Administrative Manager I	1	0	0	0	1
Analyst/Programmer II	2	0	0	0	2
Analyst/Programmer III	4	0	0	0	4
Analyst/Programmer IV	7	0	0	0	7
Analyst/Programmer V	3	0	0	0	3
Cartographer II	8	0	0	0	8
Data Processing Mgr III	1	0	0	0	1
Natural Resource Mgr I	1	0	0	0	1
Natural Resource Mgr II	1	0	0	0	1
Natural Resource Tech I	1	0	0	0	1
Totals	30	0	0	0	30